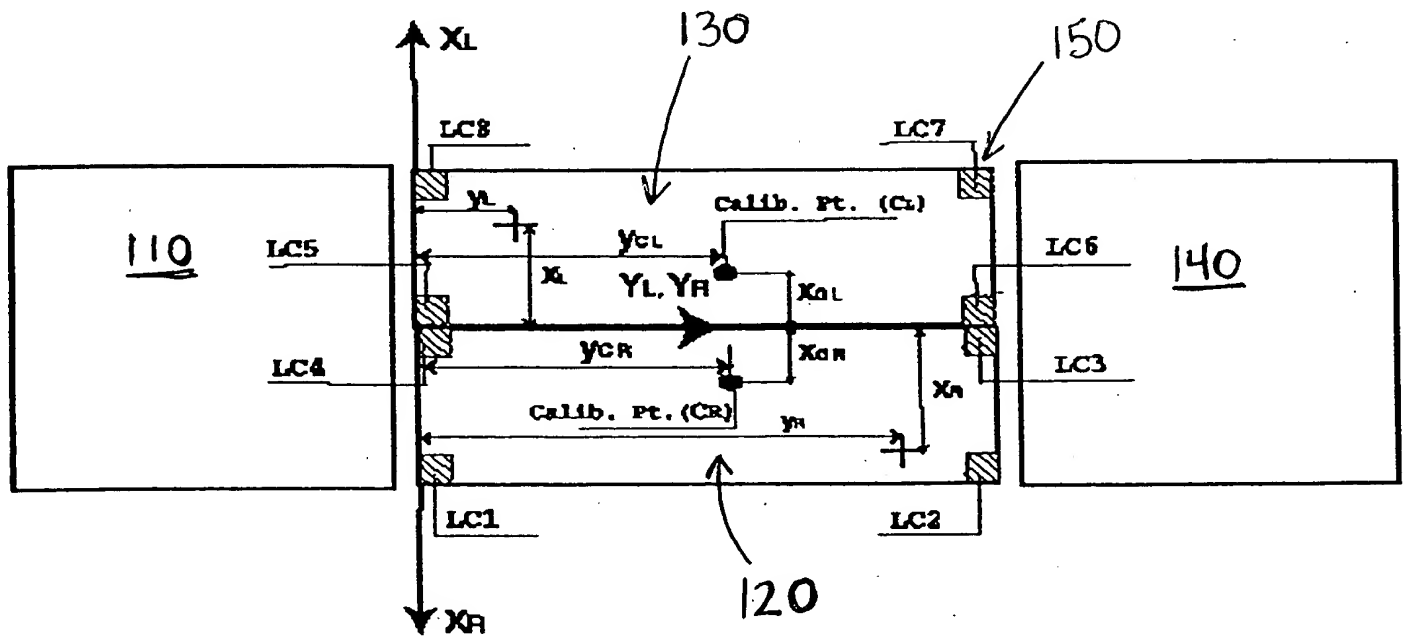


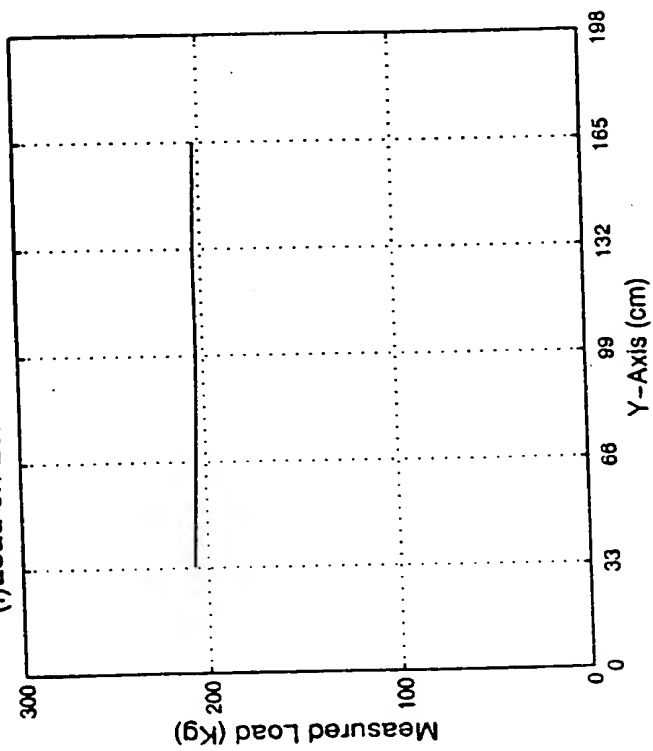
**Figure 1(b)**



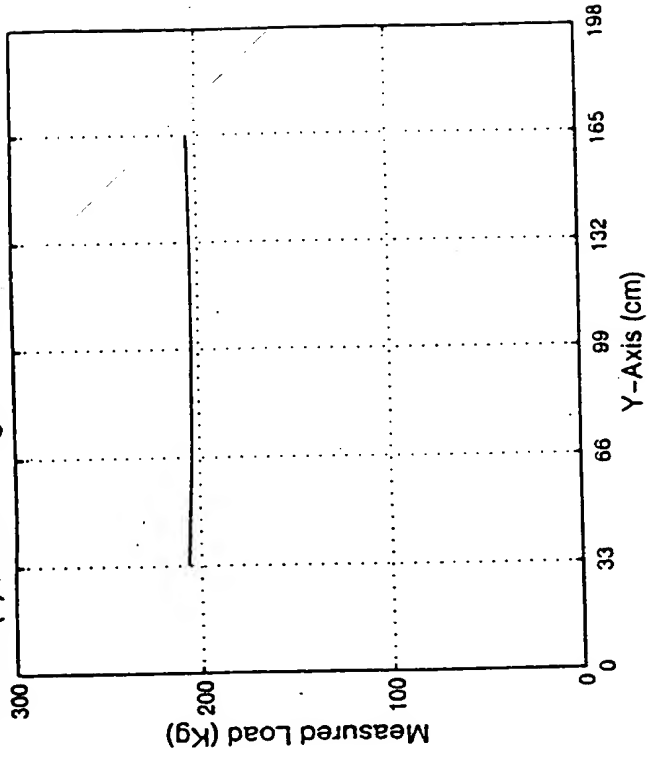
**Figure 1(c)**



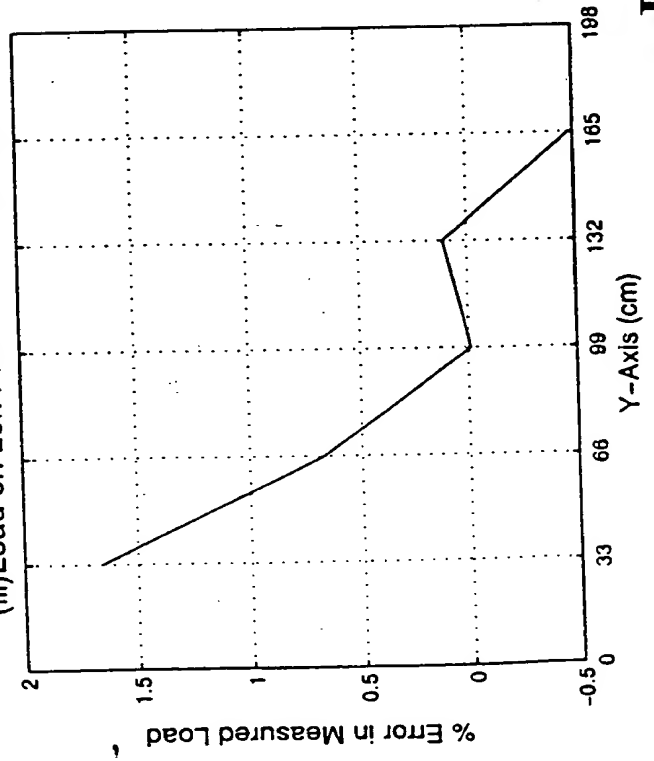
(i) Load on Left Plate @ X = 18.74 cm



(ii) Load on Right Plate @ X = 18.74 cm



(iii) Load on Left Plate @ X = 18.74 cm



(iv) Load on Right Plate @ X = 18.74 cm

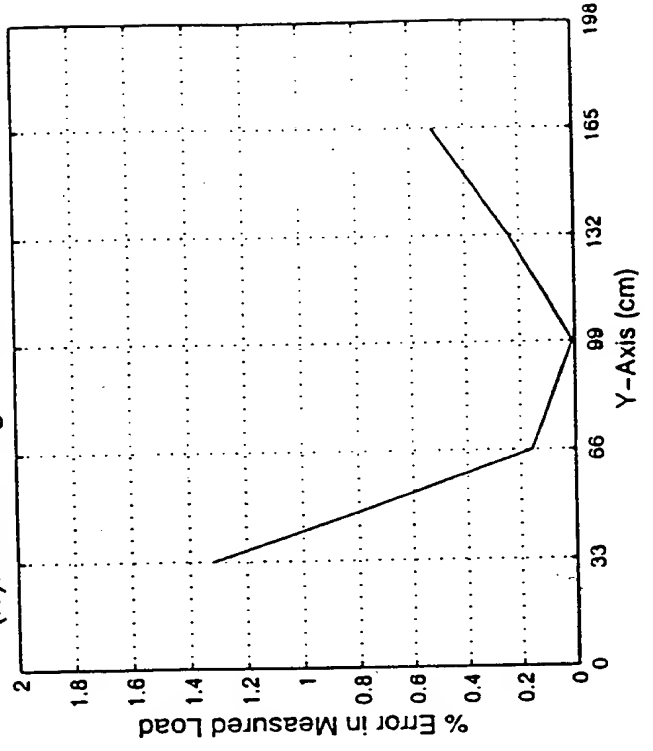
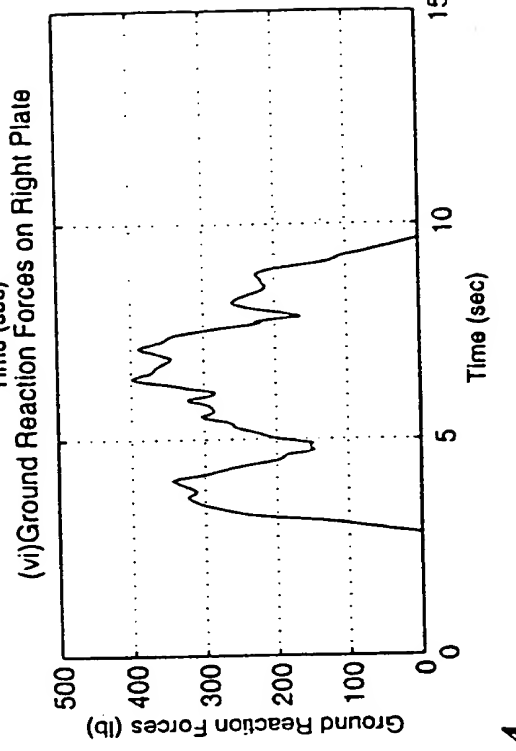
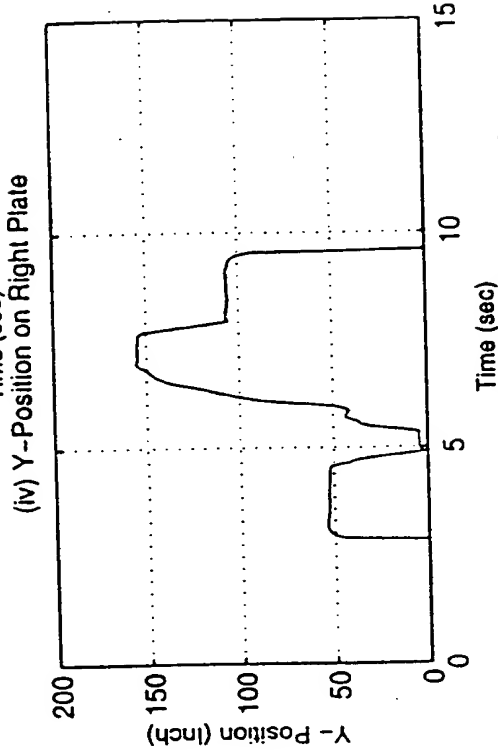
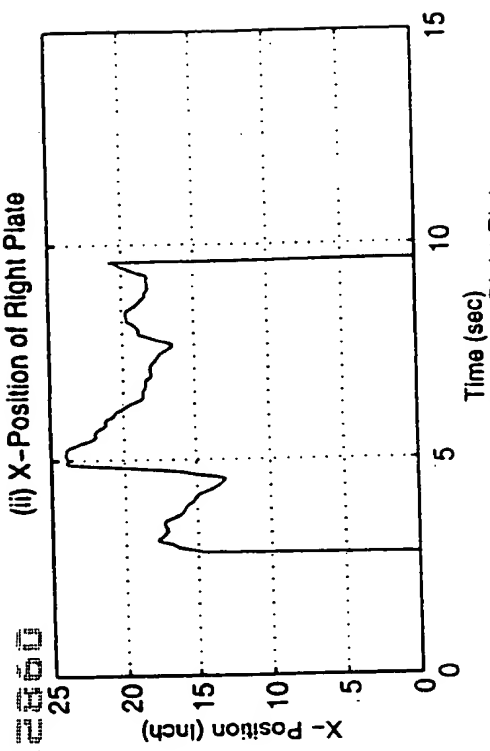
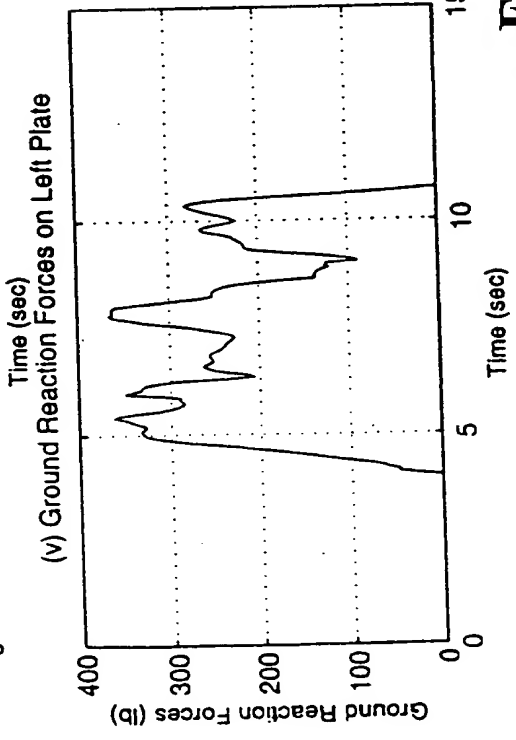
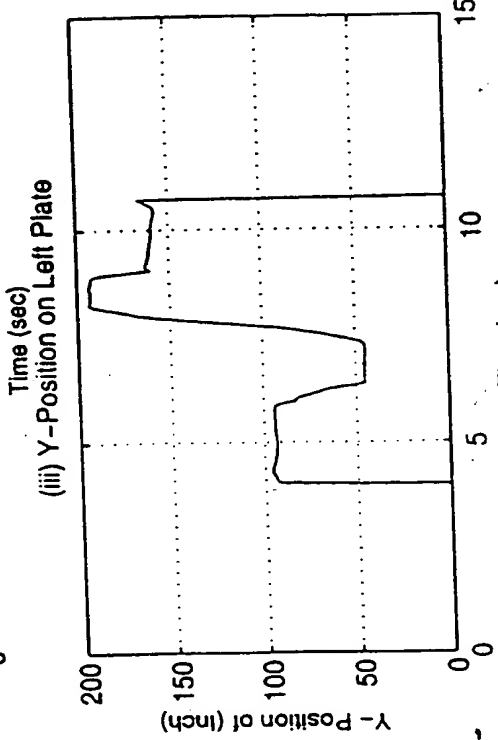
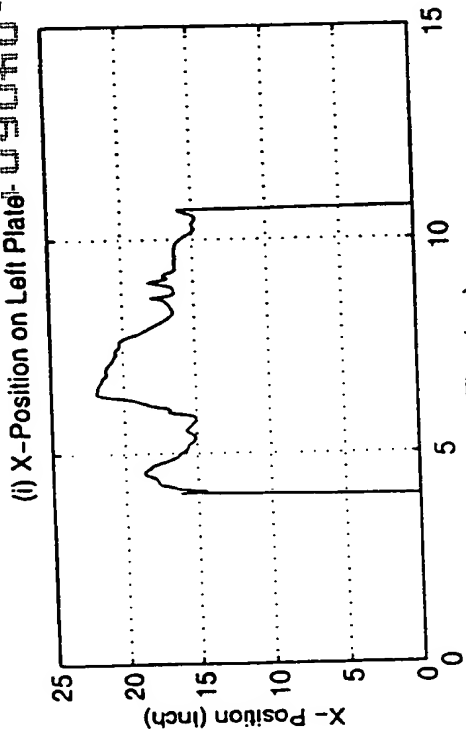
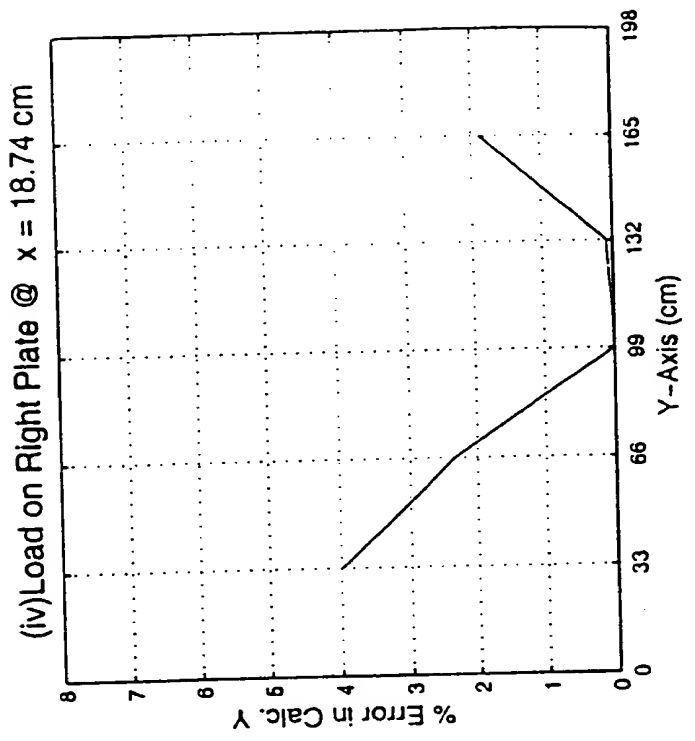
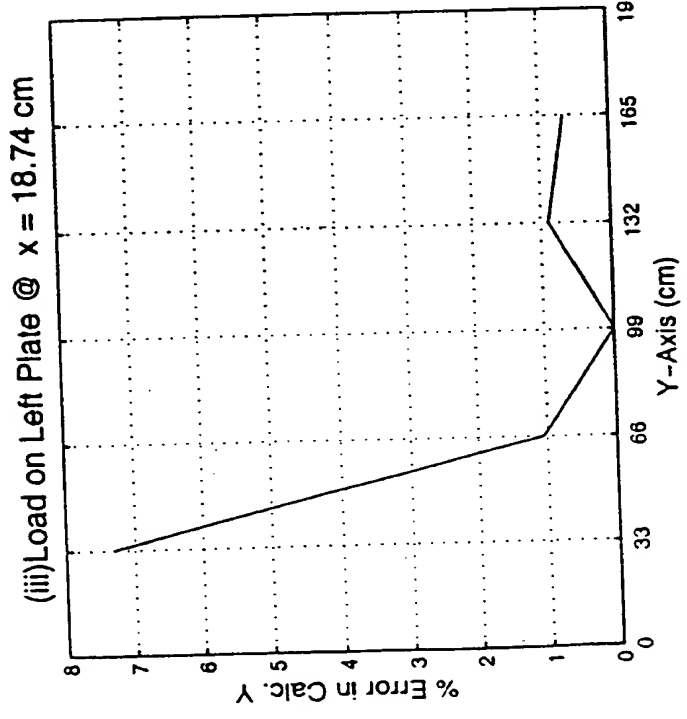
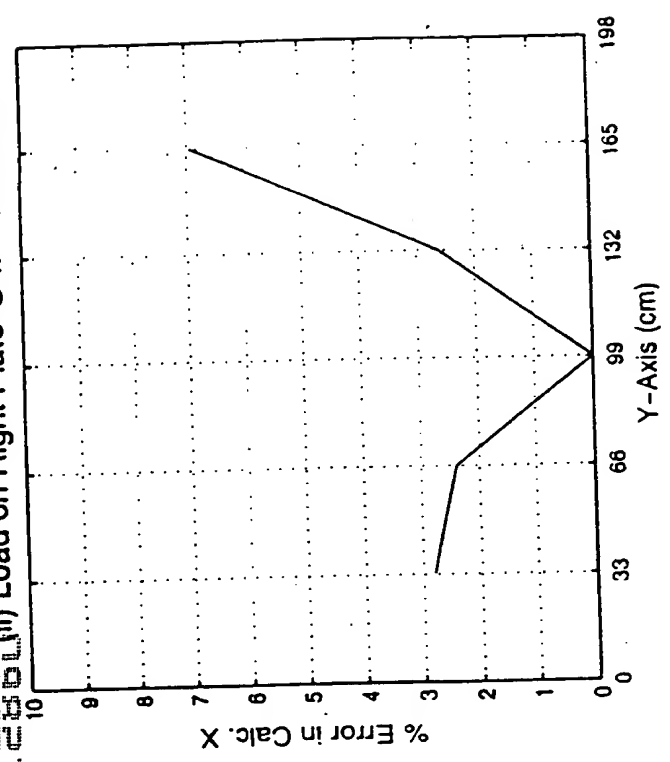
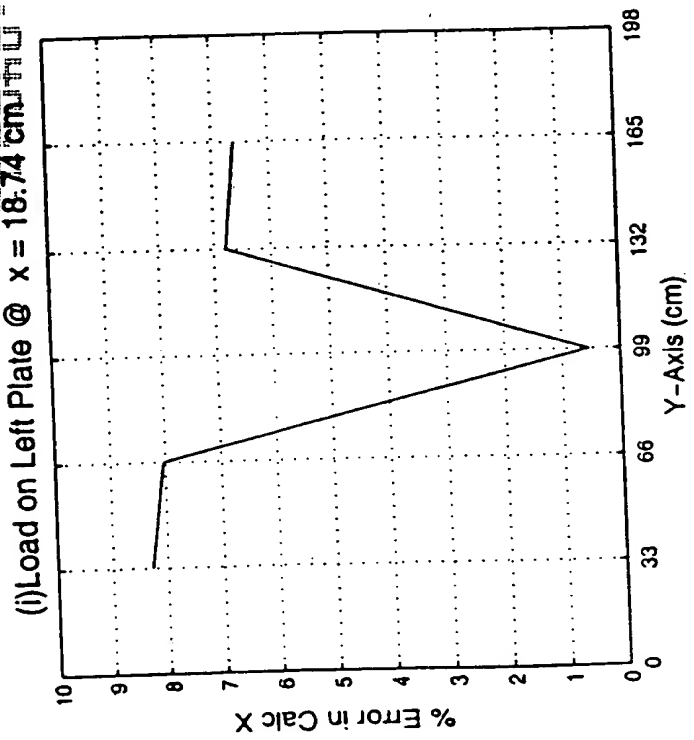


Figure 3

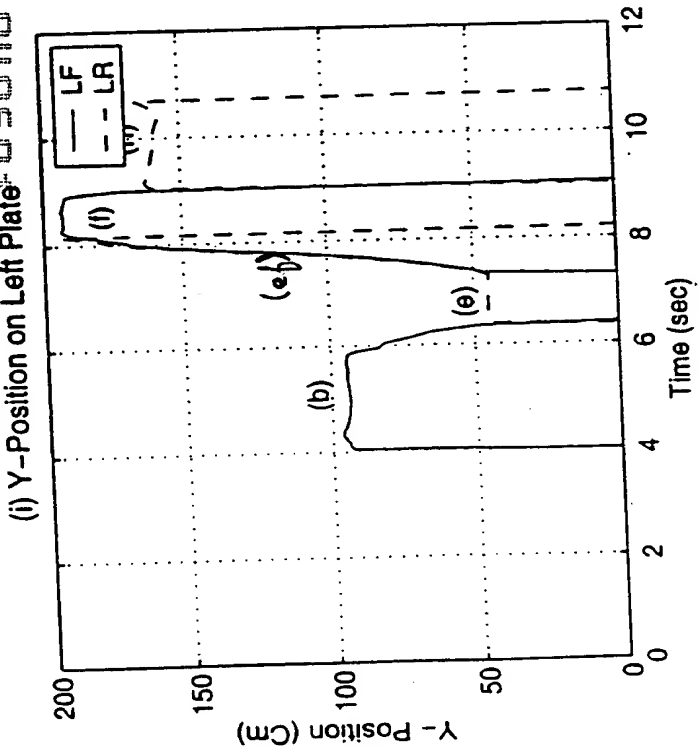
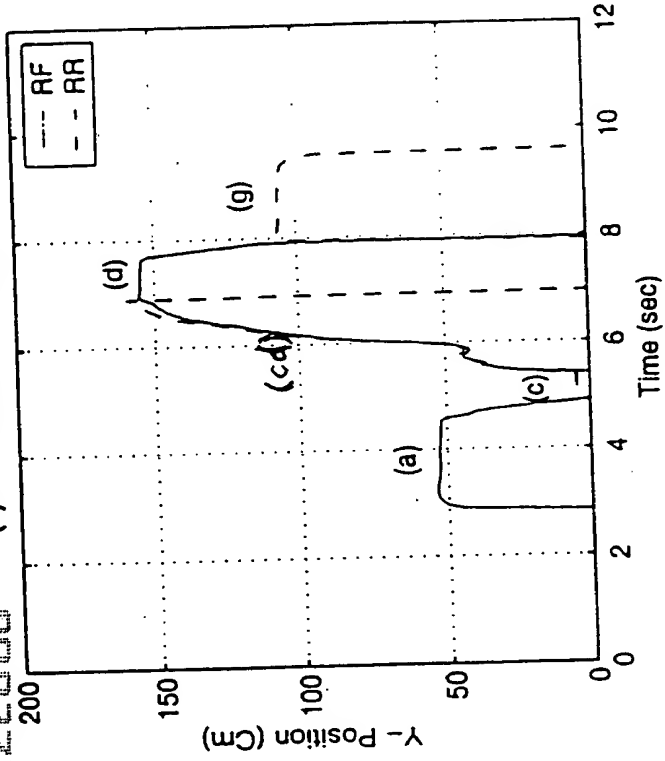
TEST 2230



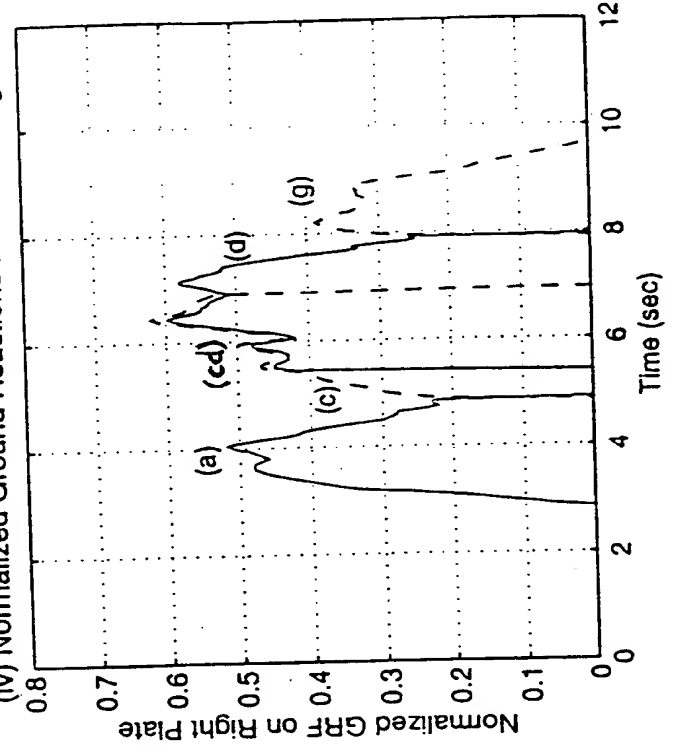
**Figure 4**



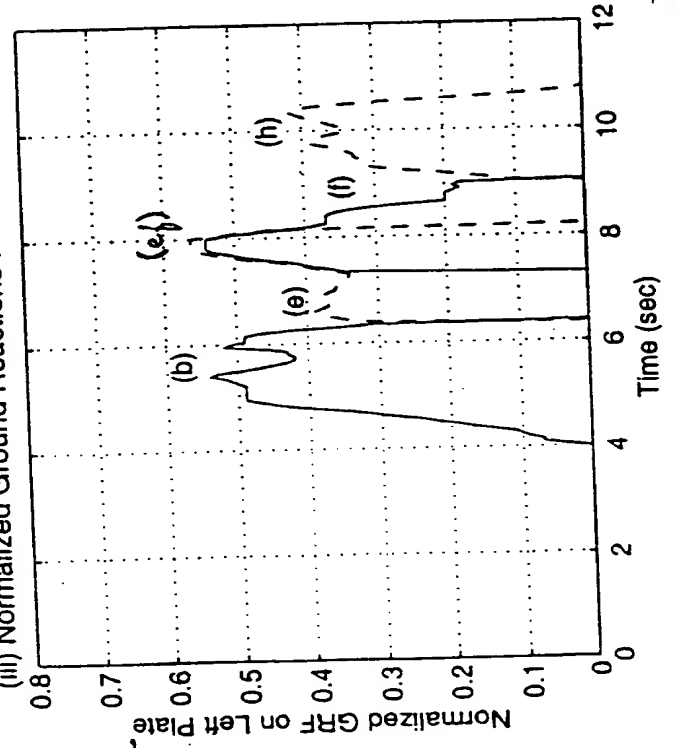
**Figure 5**



(iv) Normalized Ground Reactions Forces on Right Plate

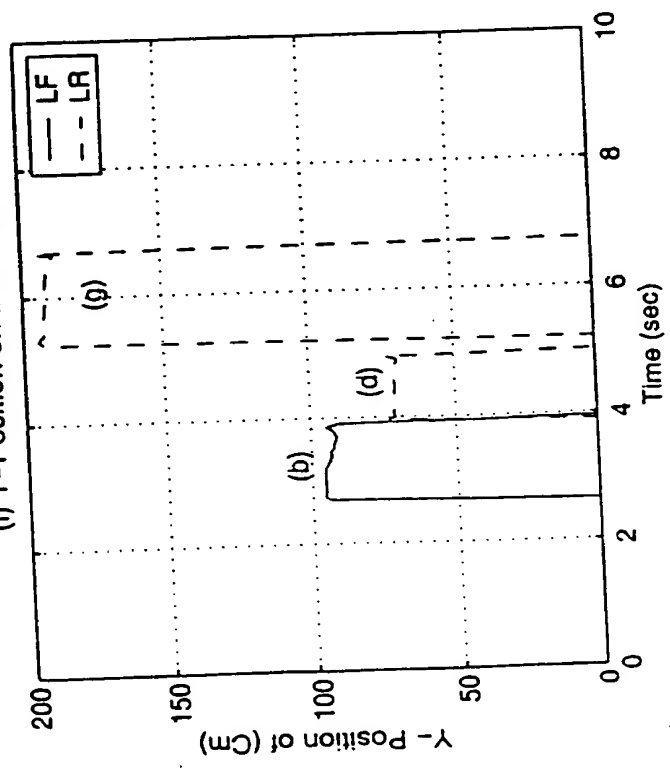


(iii) Normalized Ground Reactions Forces on Left Plate

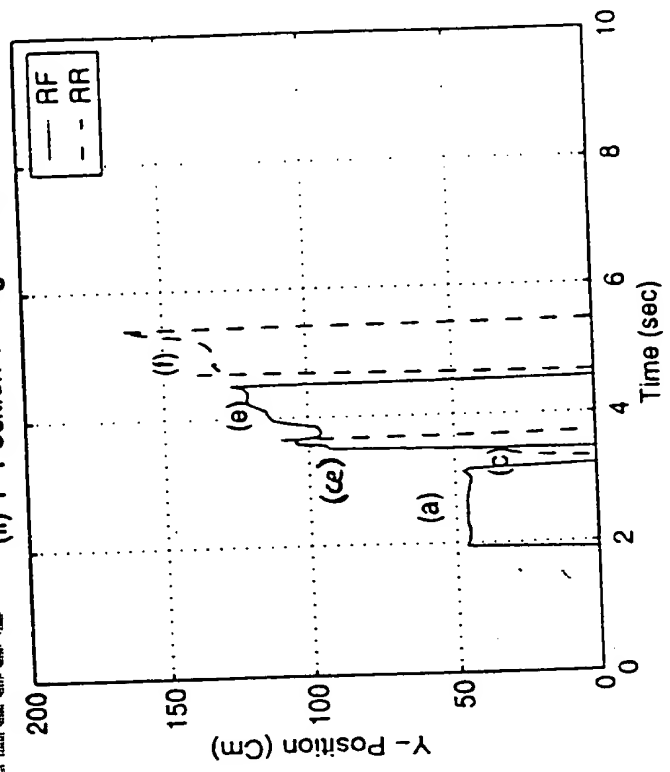


**Figure 6**

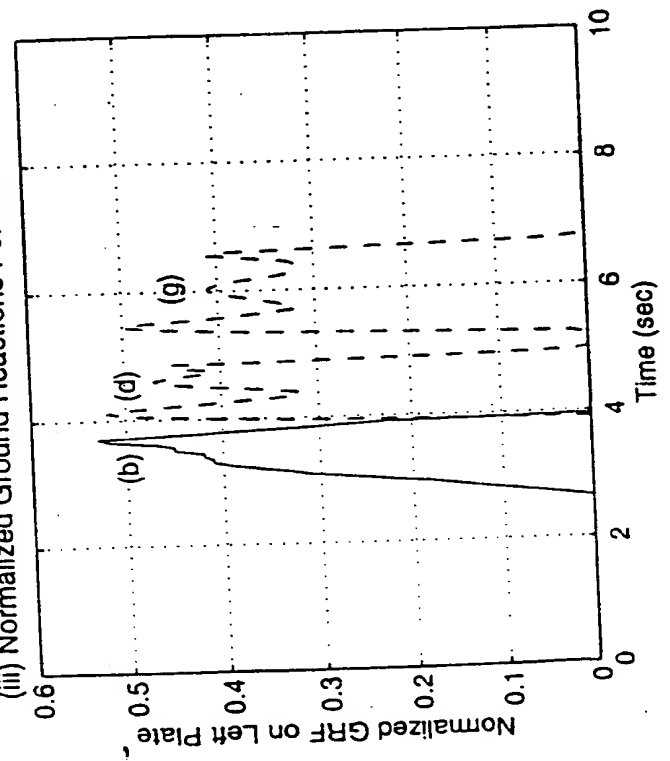
(i) Y-Position on Left Plate



(ii) Y-Position on Right Plate



(iii) Normalized Ground Reactions Forces on Left Plate



(iv) Normalized Ground Reactions Forces on Right Plate

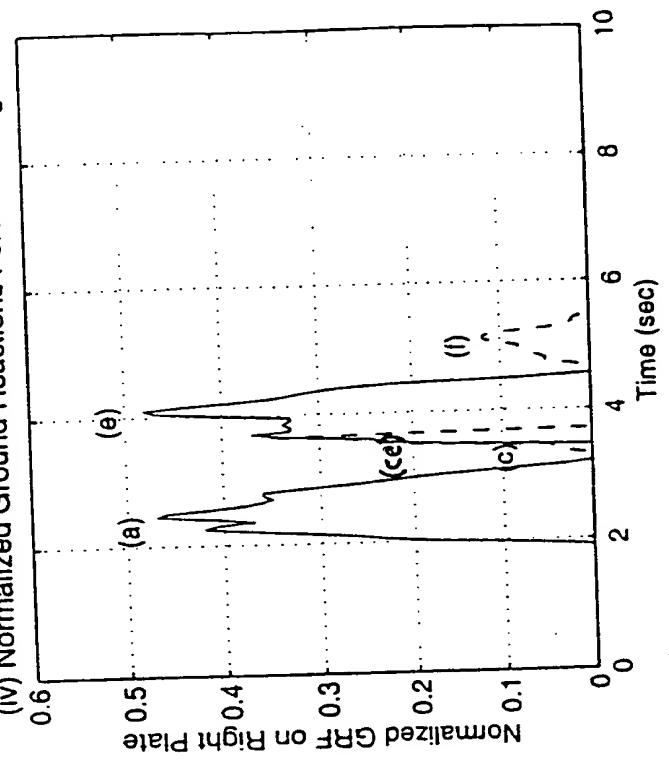
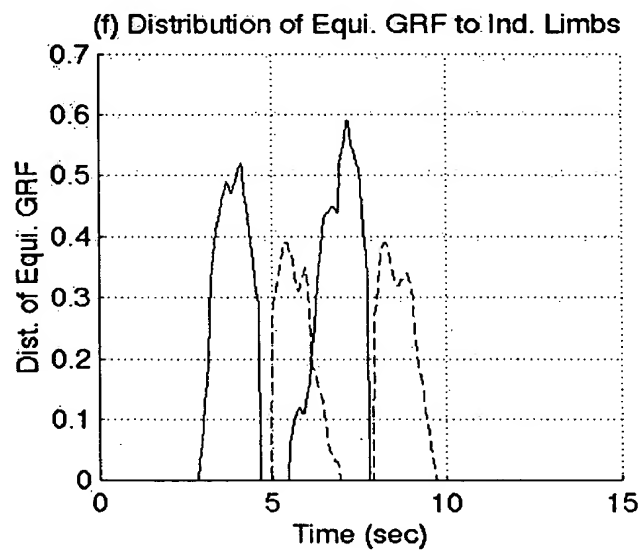
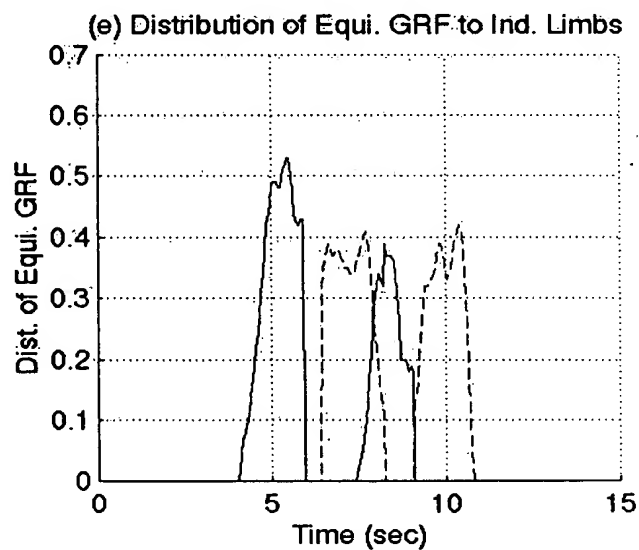
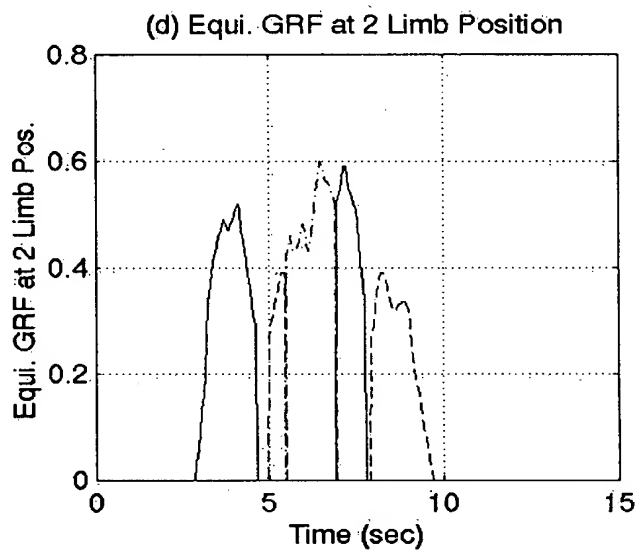
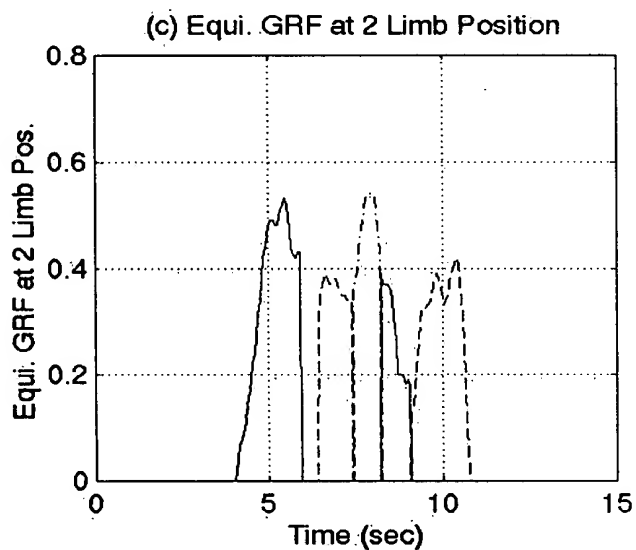
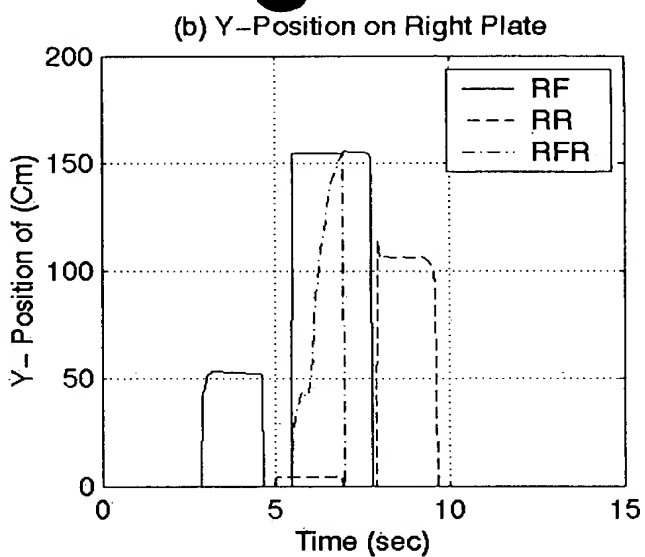
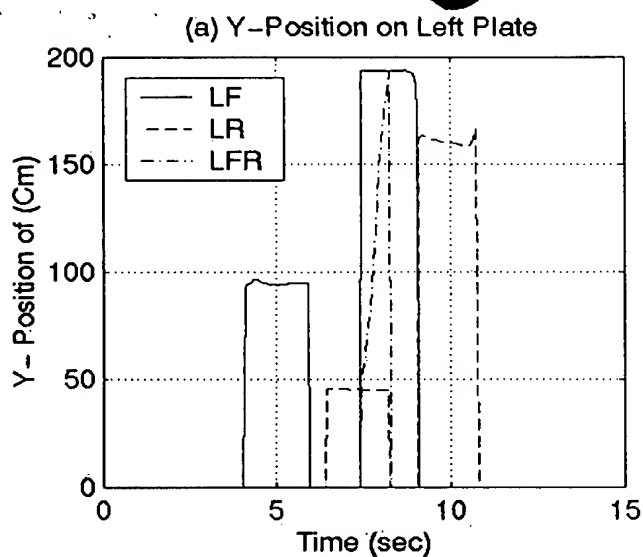


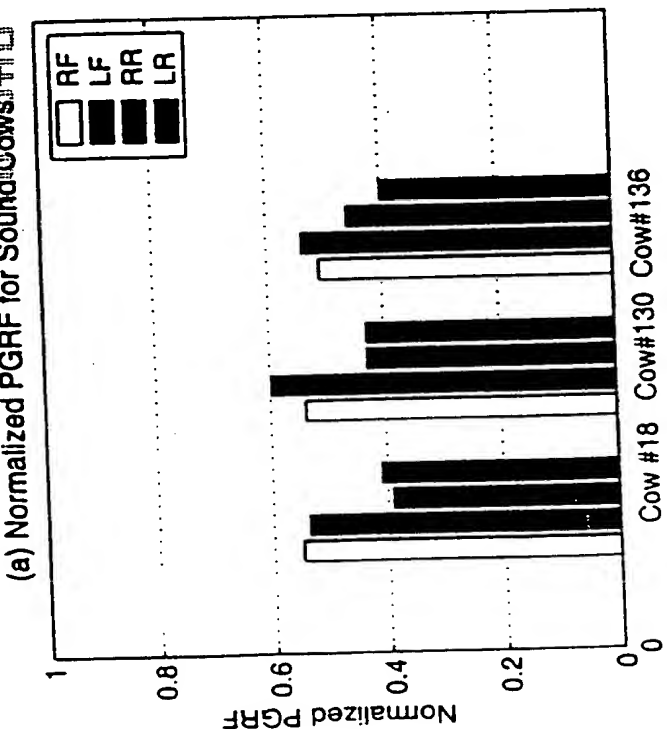
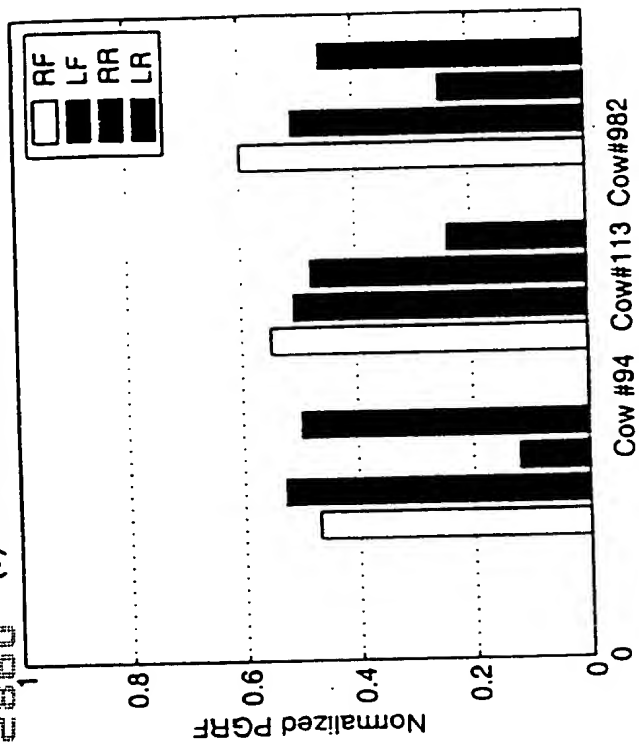
Figure 7



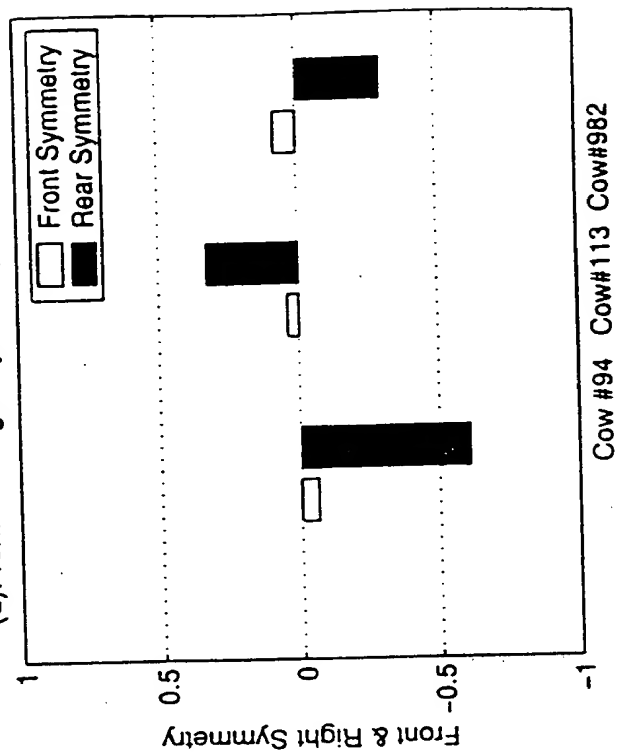
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**Figure 8**



(d) Front and Right Symmetry for Lame Cows



(b) Front & Right Symmetry for Sound Cows

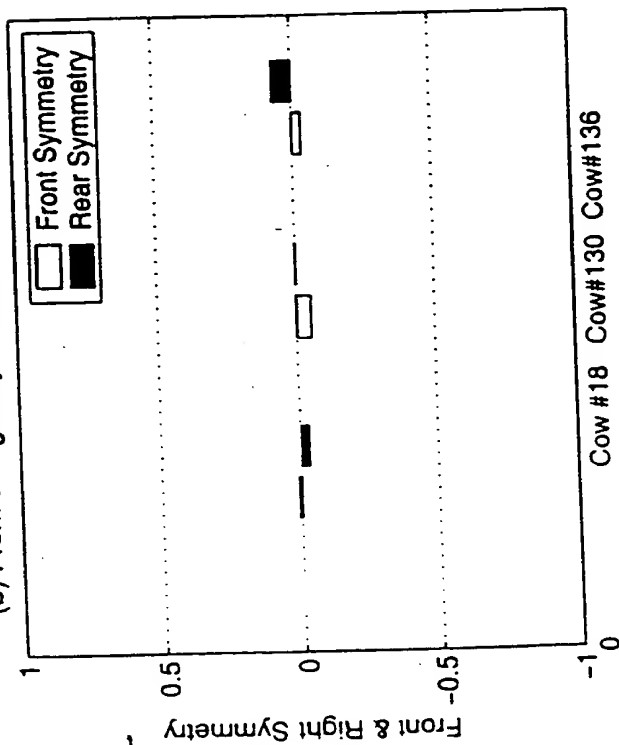
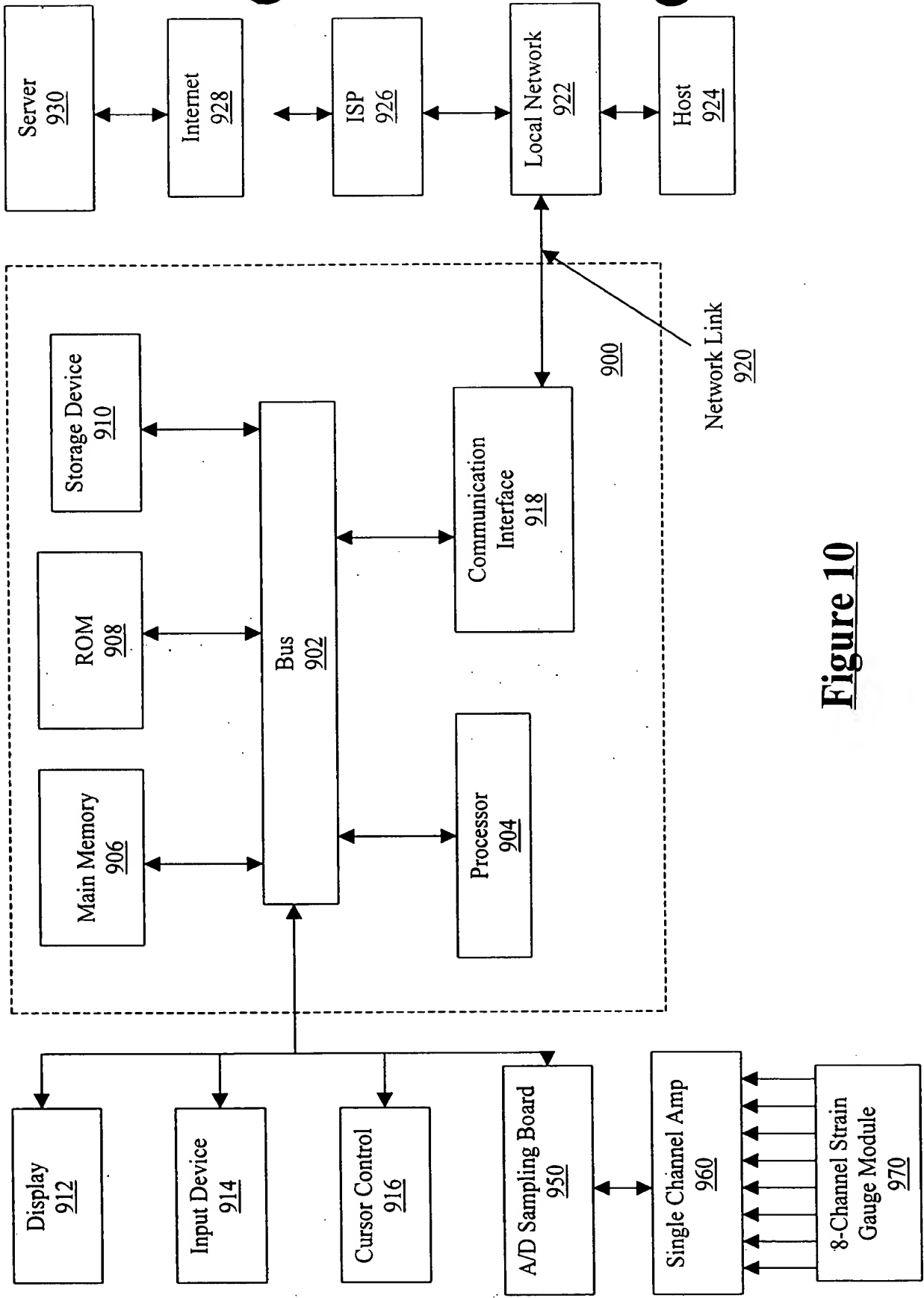


Figure 9



**Figure 10**

Limb movement variables of Individual Limbs of Sound Cows 973 and 984

Limb Movement Variables	Sound Cow 973				Sound Cow 984			
	Left Front [LF]	Right Front [RF]	Left Rear [LR]	Right Rear [RR]	Left Front [LF]	Right Front [RF]	Left Rear [LR]	Right Rear [RR]
Normalized PGRF	0.49	0.52	0.39	0.51	0.56	0.59	0.41	0.44
Stance time (sec)	1.00	0.89	1.00	0.97	1.11	1.10	0.92	1.10
Impulse (sec)	0.34	0.33	0.30	0.35	0.40	0.40	0.26	0.31
Normalized AGRF	0.34	0.37	0.30	0.36	0.36	0.36	0.28	0.29
Step size (cm)	NA	NA	NA	NA	NA	114	NA	117
Energy (1/sec)	0.47	0.47	0.37	0.40	0.54	0.55	0.41	0.35
P-energy (1/sec <sup>2</sup> )	4.51	4.70	3.32	3.34	5.15	5.32	3.77	2.81

Figure 11

Limb movement variables of Individual Limbs of Lame Cows 113 and 982

Limb Movement Variables	Lame Cow 113				Lame Cow 982			
	Left Front [LF]	Right Front [RF]	Left Rear [LR]	Right Rear [RR]	Left Front [LF]	Right Front [RF]	Left Rear [LR]	Right Rear [RR]
Normalized PGRF	0.47	0.53	0.19	0.41	0.55	0.57	0.36	0.27
Stance time (sec)	2.00	1.40	1.05	1.50	1.14	0.97	1.27	0.99
Impulse (sec)	0.67	0.44	0.11	0.53	0.40	0.35	0.33	0.16
Normalized AGRF	0.33	0.32	0.10	0.36	0.35	0.36	0.26	0.17
Step size (cm)	84	NA	117	NA	96	102	92	142
Energy (1/sec)	0.41	0.33	0.12	0.33	0.46	0.54	0.30	0.20
P-energy (1/sec <sup>2</sup> )	3.74	1.44	1.04	2.20	4.50	5.14	2.55	1.40

**Figure 12**